

What is claimed is:

1. A method for augmenting an immune response in a patient comprising the step of administering flt3-ligand and one or more compounds selected from the group consisting of CD40 binding protein, antibody reactive with 4-1BB, 4-1BB-L, interferon alpha, RANKL, and CD30 ligand antagonists to the patient.
2. A method according to claim 1, further comprising the step of administering one or more of the molecules selected from the group consisting of GM-CSF, IL-4, TNF- α , IL-3, c-kit ligand, and fusions of GM-CSF and IL-3.
3. A method according to claim 1 wherein the patient has an infectious disease.
4. A method according to claim 3, further comprising the step of administering one or more of the molecules selected from the group consisting of GM-CSF, IL-4, TNF- α , IL-3, c-kit ligand, and fusions of GM-CSF and IL-3.
5. A method according to claim 3, wherein the infectious disease is HIV.
6. A method according to claim 1 wherein the patient has a cancerous or neoplastic disease.
7. A method according to claim 6, further comprising the step of administering one or more of the molecules selected from the group consisting of GM-CSF, IL-4, TNF- α , IL-3, c-kit ligand, and fusions of GM-CSF and IL-3.
8. A preparation of dendritic cells having at least two cell surface markers selected from the group consisting of CD1a, HLA-DR and CD86, produced by contacting hematopoietic stem or progenitor cells with flt3-ligand.

9. A dendritic cell preparation according to claim 8 produced further by contacting the hematopoietic stem or progenitor cells with one or more compounds selected from the group consisting of GM-CSF, IL-4, TNF- α , IL-3, c-kit ligand, fusions of GM-CSF and IL-3, CD40 binding protein, RANKL, and interferon alpha.

10. A method of preparing an antigen-presenting dendritic cell population comprising the steps of:

(a) contacting hematopoietic stem or progenitor cells with flt3-ligand in an amount sufficient to generate a dendritic cell population;

(b) either (i) exposing the dendritic cells to an antigen-specific peptide or (ii) transfecting the dendritic cells with a gene encoding an antigen-specific peptide; and

(c) allowing the dendritic cells to process and express the antigen.

11. An antigen-presenting dendritic cell population produced by the method of claim 10.

12. A dendritic cell population according to claim 11 wherein step (a) of the process further comprises contacting the hematopoietic stem or progenitor cells with one or more compounds selected from the group consisting of GM-CSF, IL-4, TNF- α , IL-3, c-kit ligand, fusions of GM-CSF and IL-3, CD40 binding protein, RANKL, and interferon alpha.

13. A method according to claim 12, wherein step (a) further comprises contacting the hematopoietic stem or progenitor cells with a molecule selected from the group consisting of GM-CSF, IL-4, TNF- α , IL-3, c-kit ligand, fusions of GM-CSF and IL-3, CD40 binding protein, RANKL, and interferon alpha.

14. A method of enhancing a mammal's immune response to a vaccine antigen, comprising the steps of administering to such mammal an immunogenic amount of the vaccine antigen, flt3-ligand, and one or more compounds selected from the group consisting of CD40 binding protein, antibody reactive with 4-1BB, 4-1BB-L, interferon alpha, RANKL, and CD30 ligand antagonists to the patient.

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